

Amendments to the claims:

This listing of claims replaces all prior versions and listing of claims in the application.

Claim 1. (Currently amended)

A camshaft, comprising:

- a. a plurality of bearing means, wherein each of said bearing means has a corresponding lubrication supply conduit;
- b. a hollow camshaft rotatably journaled in said plurality of bearing means; and
- c. a plurality of camshaft lubrication supply ducts, wherein each said camshaft lubrication supply duct traverses a journal surface of said hollow camshaft and an interior surface of said hollow camshaft, and wherein each said camshaft lubrication supply duct rotatably aligns with said corresponding lubrication supply conduit, whereby lubricant transfers from said corresponding lubrication supply conduit to the interior of said hollow camshaft and thereby establishes a significant pressure gradient in the the interior of said hollow camshaft;
- d. a first cam lobe having a cam surface, wherein said first cam lobe has a location on said hollow camshaft adjacent to said journal surface on said hollow camshaft;
- e. a first cam surface lubrication supply duct traversing said cam surface of said first cam lobe and said interior surface of said hollow camshaft wherein said first cam surface lubrication supply duct has an aperture located on said ~~cam~~ interior surface of said ~~first cam lobe~~, and wherein said ~~camshaft lubrication supply duct~~ has an aperture located on said journal surface of said hollow camshaft, and wherein said aperture is located outside said significant pressure gradient ~~on said cam surface of said first cam lobe and said aperture located on said journal surface of said hollow camshaft~~ have an angular displacement about the rotation axis of said hollow camshaft of between zero degrees and about thirty degrees.

Claim 2. (Original)

A camshaft as described in claim 1, further comprising a second cam lobe having a cam surface, wherein said second cam lobe has a location on said hollow camshaft adjacent to

said journal surface on said hollow camshaft.

Claim 3. (Original)

A camshaft as described in claim 2, further comprising a first cam surface lubrication supply duct traversing said cam surface of said second cam lobe and said interior surface of said hollow camshaft.

Claim 4. (Currently amended)

A camshaft as described in claim 3, wherein said first cam surface lubrication supply duct traversing said first cam lobe has an aperture located on said ~~cam~~ interior surface of said ~~first cam lobe~~ hollow camshaft, and wherein said first cam surface lubrication supply duct traversing said second cam lobe has an aperture located on said ~~cam~~ interior surface of said ~~second cam lobe~~ hollow camshaft, and wherein said camshaft lubrication supply duct has an aperture located on said ~~journal~~ interior of said hollow camshaft, and wherein said aperture located on said ~~cam~~ interior surface of said first cam lobe and said aperture located on said ~~cam~~ interior surface of said second cam lobe have an angular displacement about the rotation axis of said hollow camshaft approximately bisected by said aperture located on said ~~journal~~ interior of said hollow camshaft.

Claim 5. (Original)

A camshaft as described in claim 4, further comprising:

- a. a second cam surface lubrication supply duct traversing said cam surface of said first cam lobe and said interior surface of said hollow camshaft; and
- b. a second cam surface lubrication supply duct traversing said cam surface of said second cam lobe and said interior surface of said hollow camshaft.

Claim 6. (Currently amended)

A camshaft as described in claim 5, wherein said first cam surface lubrication supply duct has a first aperture location on said ~~cam~~ interior surface, and wherein said second cam

surface lubrication supply duct has a second aperture location on said ~~cam~~ interior surface, and wherein the circumference of said aperture having said first aperture location and the circumference of said aperture having said second aperture location are separated by a distance of not less than about one aperture diameter.

Claim 7. (Original)

A camshaft as described in claim 6, further comprising a plurality of said camshaft lubrication supply ducts.

Claim 8. (Original)

A camshaft as described in claim 7, wherein each said cam surface lubrication supply duct is differentially configured to supply an amount of lubricant to substantially equalize wear of a plurality of cam surfaces.

Claim 9. (Original)

A camshaft as described in claim 8, further comprising a seal element coupled to an end of said hollow camshaft, wherein said seal element has a vent hole communicating between the interior surface and the exterior surface of said seal element.

Claim 10. (Original)

A camshaft as described in claim 9, wherein said vent hole has a location along the longitudinal axis of said hollow camshaft.

Claim 11. (Original)

A camshaft as described in claim 10, further comprising a lubrication pressurization element coupled to said lubrication supply conduit.

Claim 12. (Original)

A camshaft as described in claim 11, further comprising a lubricant responsive to said

lubrication pressurization element.

Claim 13. (Original)

A camshaft as described in claims 1, 4, 6 or 7, further comprising:

- a. a block having a least one cylinder;
- b. a reciprocal means slidably engaged to the surface of said cylinder;
- c. a reciprocal movement to rotational movement conversion element rotatably responsive to said reciprocal means and rotatably journaled in bearings;
- d. a cylinder head coupled to said block;
- e. at least two conduits communicating with each of said at least one cylinder; and
- f. at least one valve coupled to each of said at least two conduits, wherein said at least one valve is operationally responsive to said cam surface of said cam lobe of said hollow camshaft.

Claim 14. (Original)

A camshaft as described in claim 13, wherein said engine comprises an automobile engine.

Claim 15. (Original)

A camshaft as described in claim 13, wherein said engine comprises an aircraft engine.

Claims 16-25. (Canceled)